

Service Manual

ORDER NO.
TRT1111

SURFACE-MOUNT TUNE-UP WOOFER SYSTEM **TS-WX75A**

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

| Type | Model | Power Requirement | Remarks |
|-------|----------|-------------------|---------|
| | TS-WX75A | | |
| XL/UC | ○ | Not supplied | |
| XL/ES | ○ | Not supplied | |

1. SPECIFICATIONS

• Speaker specifications

Size ϕ 200mm(8"Dia.)
 Injection-molded polypropylene cone
 High compliance, rolled edge
 Heat-resistant voice coil
 Strontium magnet : 500g (18oz)

• Amplifier

Max. Power output 160W (80Hz, 30%THD)
 Continuous power output 80W (80Hz, 0.1%THD)
 INPUT LEVEL(at Gain Max)
 (RCA) 80mV+80mV/20k Ω
 (Speaker line) 1.6V+1.6V/5k Ω
 Power source DC14.4V (10.8~15.6V allowable)
 Max. current consumption 17A
 Grounding Negative ground

- Speaker system Bass reflex type
- Cabinet material Particle board
- Sensitivity 103dB/W (In car, SUV type)
- Size 488mm(19-1/4") (W) \times 249mm(9-3/4") (D) \times 236mm(9-1/4") (H)
- Weight (including accessory parts) 8.40kg (18lb 8oz)
- Gross weight (including packaging) 9.44kg (20lb 13oz)

Note :

Specifications and the design are subject to possible modification without notice due to improvements.

PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan

PIONEER ELECTRONICS SERVICE, INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.

PIONEER ELECTRONIC (EUROPE) N.V. Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium

PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 501 Orchard Road, #10-00 Lane Crawford Place, Singapore 0923

© PIONEER ELECTRONIC CORPORATION 1996

H-II X JUNE 1996 Printed in Japan

2. EXPLODED VIEW AND PARTS LIST

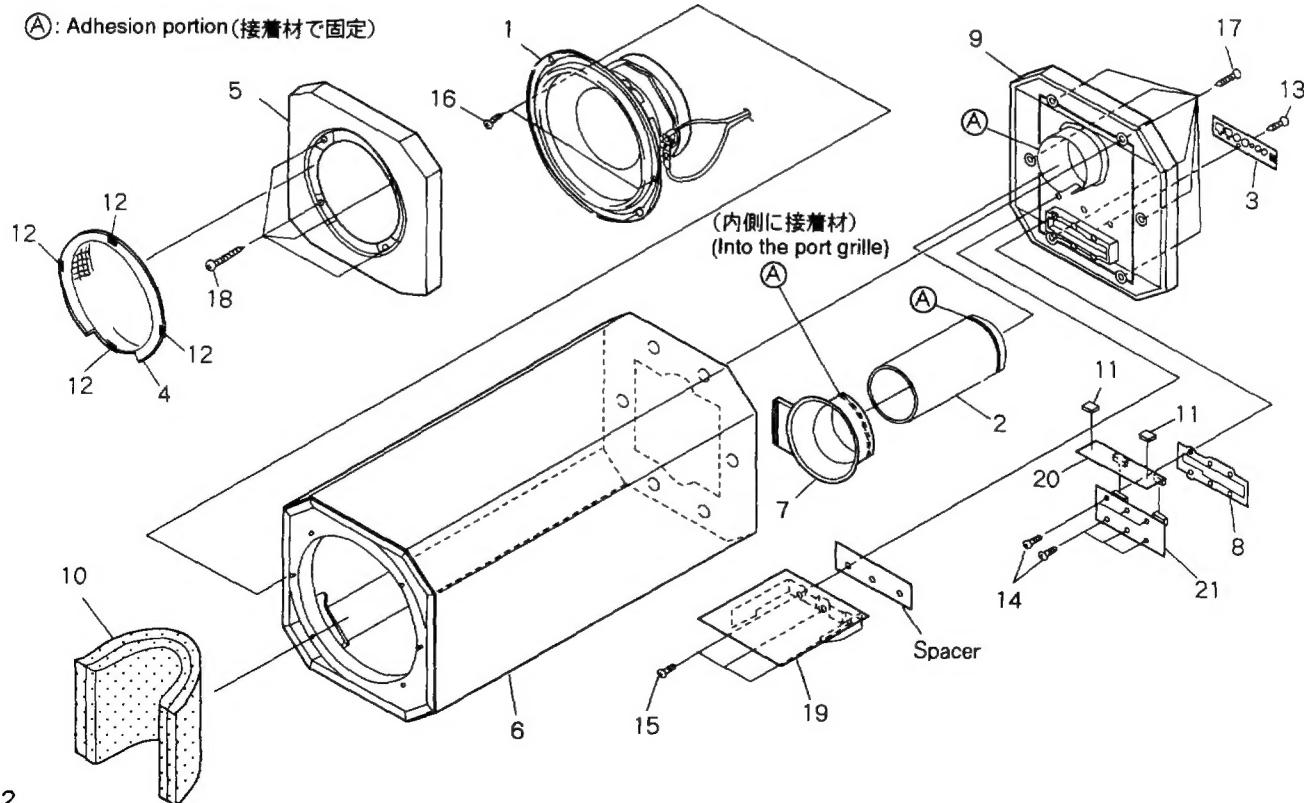
2. 分解図と部品表

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- NSP印の部品は、サービス用部品ではありません。従って原則として供給できません。

| Mark マーク | No. No. | Description 名 称 | Part No. 部品番号 | Remark 備 考 | Mark マーク | No. No. | Description 名 称 | Part No. 部品番号 | Remark 備 考 |
|-------------|--------------------------------|--------------------|------------------|---------------|-------------|-----------------------------------|--------------------|------------------|---------------|
| 1 | SPEAKER(XL/UC, XL/ES) スピーカー | 20-193AZ/XL | ×1 | | 12 | Adhesive 接着材 | TEB-084 | ×4 | |
| 1 | SPEAKER(XL1/JP) スピーカー | 20-196AZ/XL | ×1 | | 13 | Screw ネジ | BPZ26P060FZK | ×1 | |
| 2 | Port ポート | TCC1014 | ×1 | | 14 | Screw ネジ | BBZ30P080FMC | ×6 | |
| 3 | Front Panel フロントパネル | TNS1012 | ×1 | | 15 | Screw ネジ | PMA40P060FMC | ×3 | |
| 4 | Panching Net ネット | TLL1378 | ×1 | | 16 | Screw ネジ | BNC40P160FZK | ×2 | |
| 5 | Front Grille フロントグリル | TLM1329 | ×1 | | 17 | Screw ネジ | BNC40P250FZK | ×6 | |
| 6 | Cabinet キャビネット | TMM1039 | ×1 | | 18 | Screw ネジ | BNC40P400FZK | ×4 | |
| 7 | Port Ring ポートリング | TNL1015 | ×1 | | 19 | POWER AMP UNIT パワーアンプユニット | TWH1015 | ×1 | |
| 8 | Gasket 遮音パッキン | TEB1237 | ×1 | | 20 | CONTROL AMP UNIT コントロールアンプユニット | TWG1008 | ×1 | |
| 9 | Heat Sink ヒートシンク | TNA1374 | ×1 | | 21 | SWITCH BOARD UNIT スイッチ基板ユニット | TWS1023 | ×1 | |
| 10 | Sound Absorbent 吸音材 | TED1197 | ×2 | | | | | | |
| 11 | Packing パッキン | TED1283 | ×2 | | | | | | |

(A): Adhesion portion (接着材で固定)



3. PARTS LIST OF PACKING

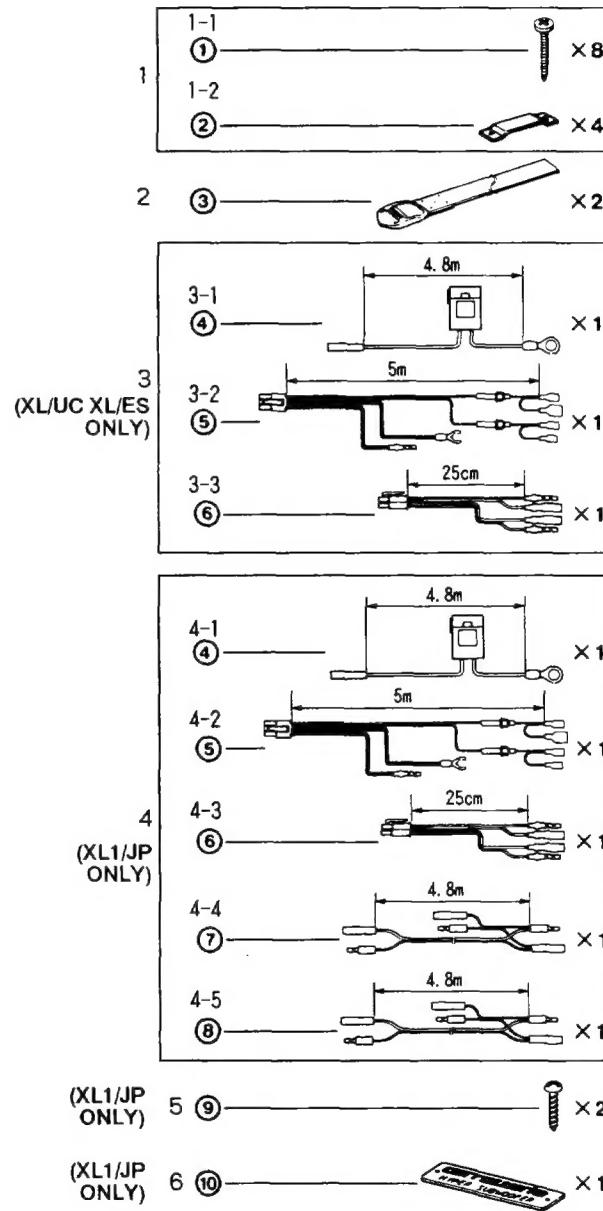
3. 梱包部品表

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- NSP 印の部品は、サービス用部品ではありません。従って原則として供給できません。

| Mark マーク | No. No. | Description 名 称 | Part No. 部品番号 | Remark 備 考 |
|-------------|------------|--|------------------|----------------|
| NSP | 1 | Installation Kit 取付部品袋 | TEA1272 | ×1 |
| NSP | 1-1 | Screw ネジ | BNC40P250FZK | ×8 |
| NSP | 1-2 | Fitting Metal 取付金具 | TNA1220 | ×4 |
| | 2 | Belt Assy ベルトASSY | TXH1427 | ×1 |
| NSP | 3 | Cord Assy (XL/UC, XL/ES) コードASSY | TXH1471 | ×1 |
| NSP | 3-1 | Cord (コ-ド) | TDC2033 | ×1 |
| NSP | 3-2 | Cord (コ-ド) | TDC2031 | ×1 |
| NSP | 3-3 | Cord (コ-ド) | TDC2032 | ×1 |
| NSP | 4 | Cord Assy (XL1/JP) コードASSY | TXH1473 | ×1 |
| NSP | 4-1 | Cord (コ-ド) | TDC2033 | ×1 |
| NSP | 4-2 | Cord (コ-ド) | TDC2031 | ×1 |
| NSP | 4-3 | Cord (コ-ド) | TDC2032 | ×1 |
| NSP | 4-4 | Cord (コ-ド(L), 緑) | TDC2046 | ×1 |
| NSP | 4-5 | Cord (コ-ド(R), 灰) | TDC2045 | ×1 |
| NSP | 5 | Parts Bag (XL1/JP ONLY) 取付部品袋 | TEA1581 | ×1 |
| NSP | 5 | Screw (ネジ) | VNC30P120FG0 | ×2 |
| NSP | 6 | Badge (XL1/JP ONLY) バッジ | TAM1139 | ×1 |
| | | Operating Instructions TRD1088 取扱説明書 (XL/UC) | | ×1 |
| | | Operating Instructions TRD1095 取扱説明書 (XL/ES) | | ×1 |
| | | Operating Instructions TRA1461 取扱説明書 (XL1/JP) | | ×1 |
| | | Operating Instructions TRA1442 取扱説明書 (XL1/JP) | | ×1 |
| | | Packing Case 個装ケ-ス (XL/UC) | THF2628 | ×1 |
| | | Packing Case 個装ケ-ス (XL/ES) | THF2629 | ×1 |
| | | Packing Case 個装ケ-ス (XL1/JP) | THF2631 | ×1 |
| | | Styrofoam Protector スチロテクター | TEC1787 | One pair 1組 |

● PARTS INCLUDED 付属品

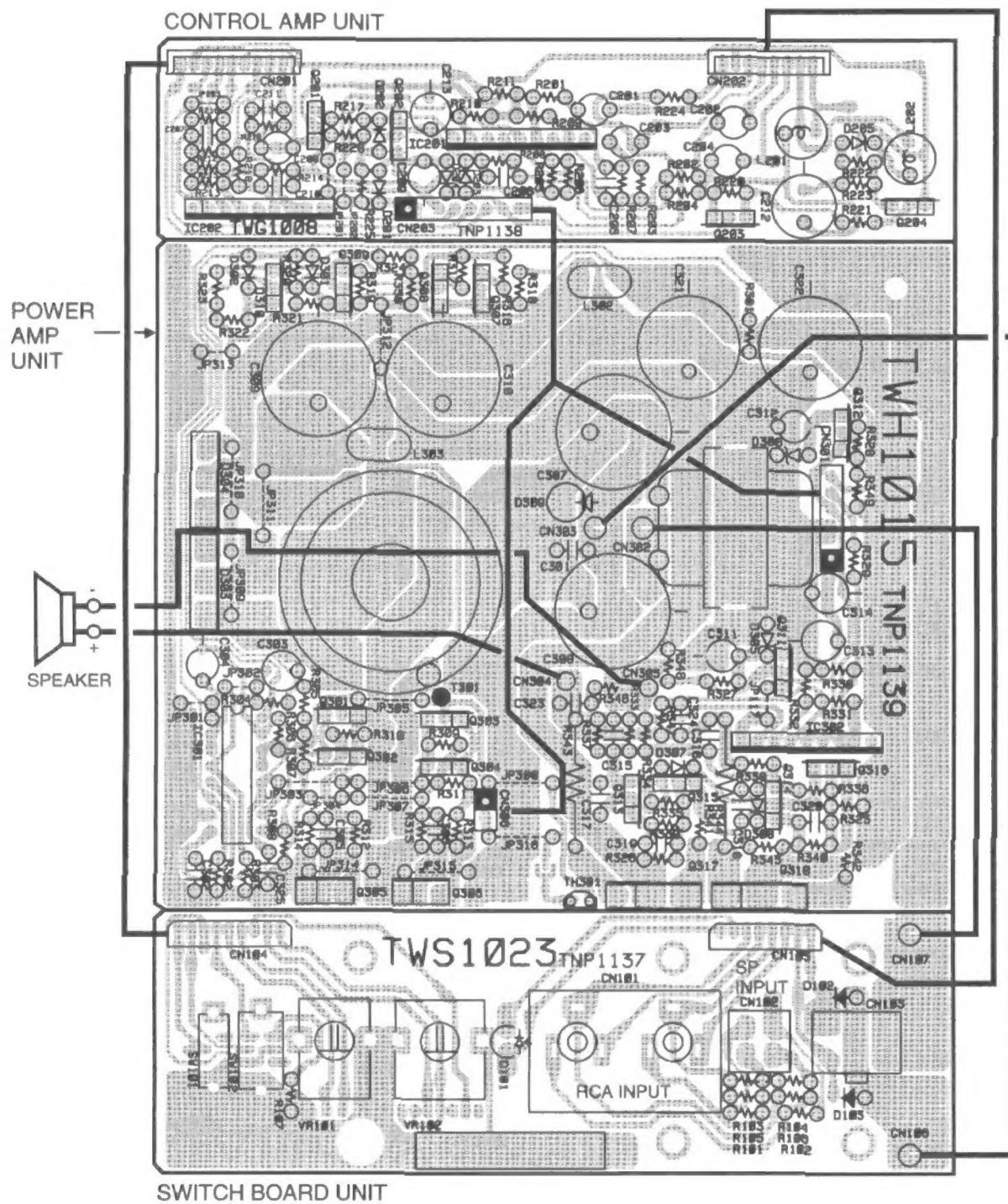


4. AMP UNIT

4. アンプユニット

4.1 PCB DIAGRAM

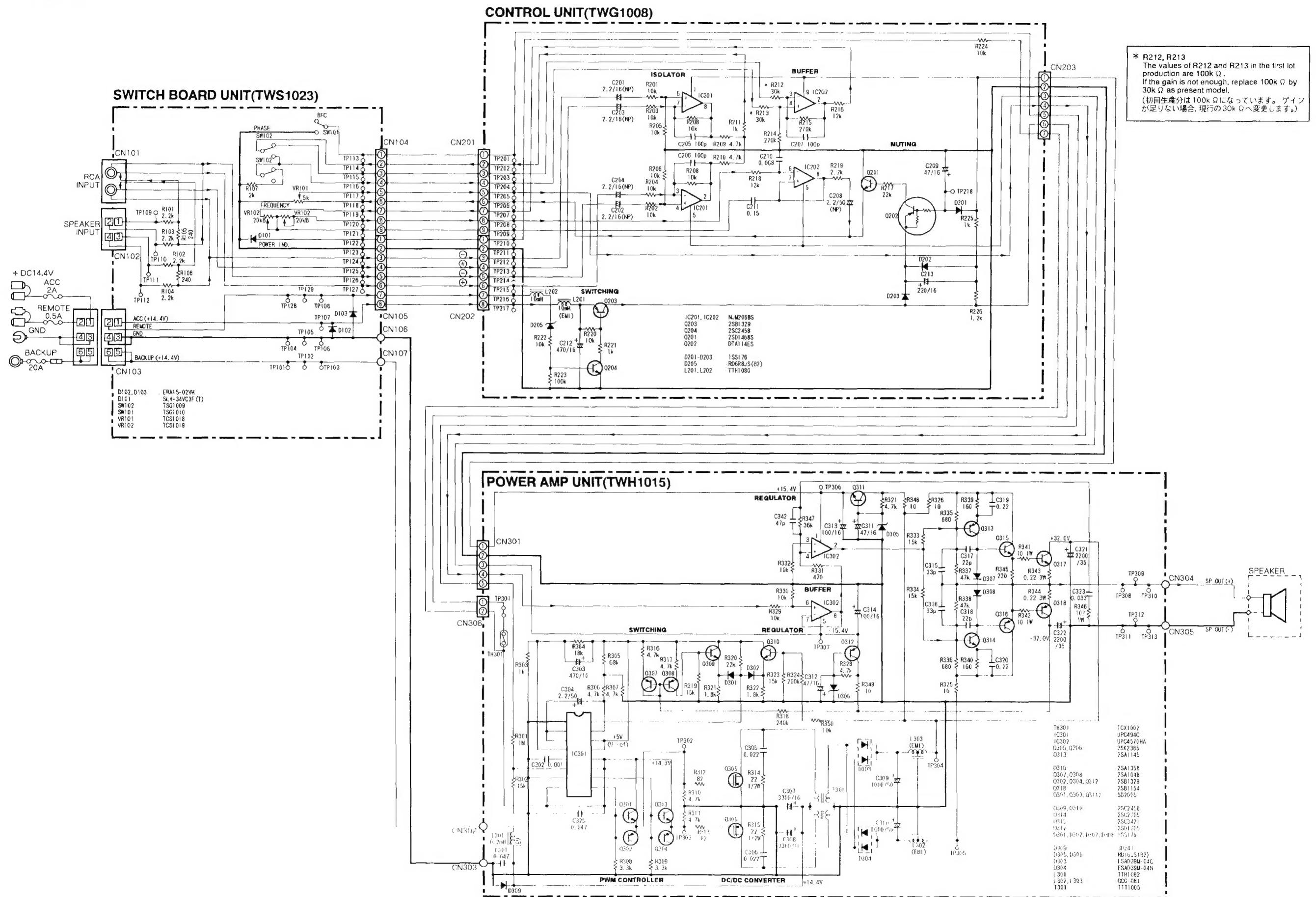
4.1 PCB図



•This diagram is viewed from the mounted parts side.

4.2 SCHEMATIC DIAGRAM

4.2 回路図



5. PCB PARTS LIST

5. 基板 ASSY の部品表

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits(any digit apart from 0), such as 560 ohm and 47k ohm(tolerance is shown by J=5%, and K=10%).

560 Ω $\rightarrow 56 \times 10^1 \rightarrow 561$ RD1/4PU 5 6 1 J
 47k Ω $\rightarrow 47 \times 10^3 \rightarrow 473$ RD1/4PU 4 7 3 J
 0.5 Ω $\rightarrow 0R5$ RN2H 0 R 5 K
 1 Ω $\rightarrow 1R0$ RS1P 1 R 0 K

Ex.2 When there are 3 effective digits(such as in high precision metal film resistors).

5.62k Ω $\rightarrow 562 \times 10^3 \rightarrow 5621$ RN1/4PC 5 6 2 1 F

● NSP 印の部品は、サービス用部品ではありません。従って原則として供給できません。

● Δ 印の部品は、安全上重要な部品です。交換する時は、安全および性能維持のため必ず指定の部品をご使用ください。

● ● 印の部品は、供給に時間要するか、場合によっては供給をお断りすることがあります。

注: 抵抗器は、□□□に抵抗値をコードで入れ、本来の部品番号に直して発注してください。

例1 560 Ω 、47k Ω など、0以外の数字(有効数字)が2桁の場合

(誤差が J = $\pm 5\%$ 、K = $\pm 10\%$ の抵抗器はすべて該当)
 560 Ω $\rightarrow 56 \times 10^1 \rightarrow 561$ RD1/4PU 5 6 1 J
 47k Ω $\rightarrow 47 \times 10^3 \rightarrow 473$ RD1/4PU 4 7 3 J
 0.5 Ω $\rightarrow 0R5$ RN2H 0 R 5 K
 1 Ω $\rightarrow 1R0$ RS1P 1 R 0 K

例2 有効数字が3桁の場合(誤差が F = $\pm 1\%$ の抵抗器)

5.62k Ω $\rightarrow 562 \times 10^3 \rightarrow 5621$ RN1/4PC 5 6 2 1 F

| Mark マーク | No. No. | Description 名 称 | Part No. 部 品 番 号 | Mark マーク | No. No. | Description 名 称 | Part No. 部 品 番 号 |
|-------------------------------|-----------------------------------|--------------------|---------------------|-------------|------------|------------------------|---------------------|
| LIST OF UNIT (ユニットの一覧) | | | | | | | |
| NSP | AMP UNIT アンプユニット | | TWX1014 | | Q309, Q310 | | 2SC2458 |
| | POWER AMP UNIT パワーアンプユニット | | TWH1015 | | Q314 | | 2SC2705 |
| | CONTROL AMP UNIT コントロールアンプユニット | | TWG1008 | | Q315 | | 2SC3421 |
| | SWITCH BOARD UNIT スイッチパネルユニット | | TWS1023 | | Q317 | D301, D302, D307, D308 | 2SD1705 ISS176 |
| | | | | | D309 | | 3DZ41 |
| | | | | | D305, D306 | | RD16JS(B2) |
| | | | | | D303 | | ESAD39M-04C |
| | | | | | D304 | | ESAD39M-04N |

POWER AMP UNIT (パワーアンプユニット)

SEMICONDUCTORS (半導体)

| | |
|------------------|-----------|
| TH301 | TCX1002 |
| IC301 | UPC494C |
| IC302 | UPC4570HA |
| Q305, Q306 | 2SK2385 |
| Q313 | 2SA1145 |
| Q316 | 2SA1358 |
| Q307, Q308 | 2SA1048 |
| Q302, Q304, Q312 | 2SB1329 |
| Q318 | 2SE1154 |
| Q301, Q303, Q311 | 2SD2005 |

COIL (コイル)

L301 (0.2mH) EMI
 L302, L303 EMI

TTH1082
 CCG-081

TRANSFORMER (トランス)

T301

TTT1005

CAPACITORS (コンデンサ)

| | |
|-------------------------------|-------------|
| C302 | CQMA102J50 |
| C305, C306 | CFTNA223J50 |
| C319, C320 | CFTNA224J50 |
| C323 | CFTNA333J50 |
| C317, C318 | CCCSL220J50 |
| C315, C316 | CCCSL330J50 |
| C324 | CCCSL470J50 |
| C301, C325 | CGCYX473K25 |
| C313, C314 | CEAS101M16 |
| C309, C310 (1000 μ F/35V) | TCH1227 |

| Mark マーク | No. No. | Description 名 称 | Part No. 部品番号 |
|-------------|------------|--------------------|------------------|
| | C321, C322 | (2200 μ F/35V) | TCH1229 |
| | C304 | | CEAS2R2M50 |
| | C311, C312 | | CEAS470M16 |
| | C303 | | CEAS471M10 |
| | C307, C308 | (3300 μ F/16V) | TCH1230 |

| |
|-------------------------|
| RESISTORS (抵抗器) |
| R341, R342, R346 |
| R343, R344 |
| Other resistors(その他抵抗器) |

| |
|------------------------|
| OTHERS (その他) |
| BRACKET(ブレケット) |
| CN301, CN306 CORD(コード) |
| CN302 CORD(コード) |
| CN304, CN305 CORD(コード) |
| CN303 CORD(コード) |

CONTROL AMP UNIT (コントロールアンプユニット)

| |
|-----------------------------|
| SEMICONDUCTORS (半導体) |
| IC201, IC202 |
| Q203 |
| Q204 |
| Q201 |
| Q202 |
| D201-D203 |
| D205 |

| |
|-----------------------|
| COILS (コイル) |
| L201, L202 (10mH) EMI |

| |
|---------------------------|
| CAPACITORS (コンデンサ) |
| C211 |
| C210 |
| C205-C207 |
| C209 |
| C212 |
| C201 C204, C208 |
| C213 (220 μ F/16V) |

| |
|------------------------|
| RESISTORS (抵抗器) |
| All resistors(全ての抵抗器) |

| |
|-----------------------|
| OTHERS (その他) |
| CN202 CONNECTOR(コネクタ) |
| CN201 CONNECTOR(コネクタ) |

SWITCH BOARD UNIT (スイッチキズユニット)

| |
|-----------------------------|
| SEMICONDUCTORS (半導体) |
| D102, D103 |
| D101 |
| SW102 |

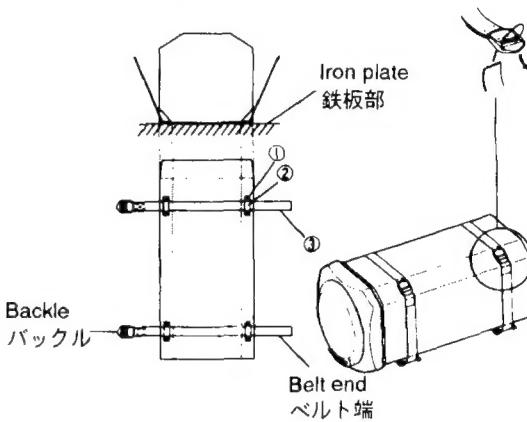
| |
|------------------------|
| SWITCHES (スイッチ) |
| SW101 |

| Mark マーク | No. No. | Description 名 称 | Part No. 部品番号 |
|------------------------|--------------------------|--------------------|------------------|
| RESISTORS (抵抗器) | | | |
| | VR101 (5k Ω) | | TCS1018 |
| | VR102 (20k Ω) | | TCS1019 |
| | Other resistors(その他の抵抗器) | | RD1/4PU□□□J |

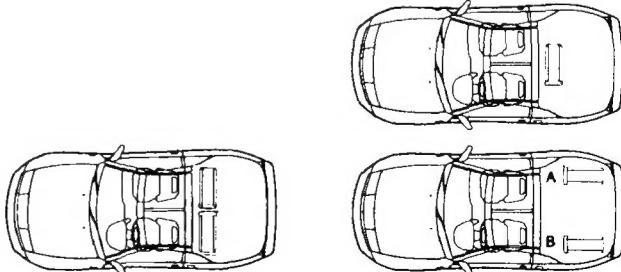
| |
|-------------------------|
| OTHERS (その他) |
| CN201 RCA JACK(RCAジャック) |
| CN103 CONNECTOR(コネクタ) |
| CN102 CONNECTOR(コネクタ) |
| CN105 CONNECTOR(コネクタ) |
| CN106 CONNECTOR(コネクタ) |

LED SPACER(LEDスペーサー) MNK1123

6. HOW TO INSTALL 6. 取付方法



7. EXAMPLE OF MOUNTING 7. 取付例



Either A or B if one piece.
1個の場合はAまたはBの位置に取付けて下さい。